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USSR: The Food Supply Situation



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An Intelligence Assessment

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*SOV 85-10042
March 1985*

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An Intelligence Assessment

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Division, SOVA,

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Key Judgments*Information available
as of 1 January 1985
was used in this report.*

The diet is the single most important determinant of consumer welfare in the USSR, in the perceptions of the population as well as in Soviet and Western measures of consumption. Food availability in relation to demand, the quality of the diet, and the leadership's handling of food issues therefore have important implications for social stability.

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Although nutritional levels in the USSR have been generally adequate during the post-World War II era, the Soviet diet has not met consumer demand for quality foods or for greater variety. Providing more meat and other quality foods such as dairy products and fruit has been a major focus of Moscow's approach to consumer welfare for three decades:

- Considerable progress was made in the 1960s and early 1970s, and the Soviet diet began to resemble more closely that of the United States and Western Europe.
- When agricultural shortfalls checked this progress in the late 1970s and early 1980s, consumer disappointment was keen.
- The queuing experienced by consumers and the shortages of meat, milk, and other quality foodstuffs symbolized and heightened the sense of stringency arising from the general economic slowdown.
- The leadership was especially worried by a rising incidence of strikes related to food shortages in the 1980-82 period.

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General Secretaries Andropov and Chernenko adopted a number of measures to cope with the food situation. They first lent their support to the Brezhnev Food Program because of its long-term potential. To deal with consumer discontent in the near term, first Brezhnev and then Andropov and Chernenko:

- Launched an apparently successful campaign to lower expectations of a quick solution to shortages of quality foods.
- Granted special food allocations to favored enterprises to head off discontent among workers.
- Rationed meat and other products in short supply.
- Increased official support to private agriculture.
- Purchased huge quantities of grain and foodstuffs to support higher production and consumption of quality foods.

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With the help of better harvests in 1982 and 1983, the leadership's policies had some success in increasing food availability in 1983 and 1984. Meat and milk output reached new highs in 1983 and again in 1984. [redacted] queuing declined somewhat, and prices in the relatively free collective farm markets leveled off. Overall, per capita consumption of food increased by 2 percent per year in 1983-84, after stagnating in 1981-82. Moreover, since 1982 we have received only two reports of significant unrest occasioned by food shortages. [redacted]

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The USSR's food problem has not disappeared, however. Rising incomes continue to push up demand, especially for quality foods. The structure of the Soviet food supply therefore is far from satisfying consumer preferences. In addition, planners have to take into account the erosion in the quality of some foods (watery milk, increased spoilage of fruit and vegetables) and the still pronounced regional differences in the extent to which the demand for quality foods is satisfied. Finally, the leadership has made little progress in reducing food imports—a key goal of the Food Program. [redacted]

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The Food Program set goals for 1990 per capita food consumption that would bring the availability of quality foods (with the exception of meat) to levels approaching, or even exceeding, those in the United States in 1982. If, however, production of these commodities grows at the average annual rates of the 1960-83 period, only the consumption targets for eggs and milk will be met. To meet 1990 consumption targets for other commodities, the Soviet Union would need to continue or boost imports of meat, vegetables, fruit, raw sugar, vegetable oil, and fish. [redacted]

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The "food problem," which the late Secretary General Brezhnev termed "the most pressing political and economic issue to be addressed in the 1981-85 period," is thus not likely to be alleviated substantially by 1990. But the experience of the past few years suggests that modest growth in production and continued imports of quality foods, leadership circumspection regarding promises of improvement in consumption, and a continuation of the system of distributing food at the workplace will probably prevent food shortages from becoming the volatile issue they threatened to become in the late 1970s and early 1980s. Moscow appears to have blunted the potentially serious impact of food shortages with a number of measures that are likely to remain in place for at least several years—whether or not growth in consumption of quality food continues at its recent pace. [redacted]

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Table 1
Selected Countries: Per Capita Consumption
of Various Foods in 1981

Kilograms

	Meat ^a	Fish	Eggs	Sugar	Potatoes	Bread and Bread Products
USSR	53	18	14	44	105	138
United States	110	8	15	36	35	68
West Germany	98	NA	17	31	81	68
Norway	50	37	11	35	70	80
Italy	77	NA	11	31	41	127
Spain	75	NA	18	27	113	76
Poland	72	7	13	33	155	128
Bulgaria	71	7	12	35	30	159
Hungary	73	NA	19	36	59	113
Czechoslovakia	87	5	19	37	79	109

^a Meat is on a carcass-weight basis and includes edible offals. Meat for Norway does not include poultry. The Soviet official meat consumption number was adjusted to exclude slaughter fat.

Sources: *Basic Statistics of the Community*, Luxembourg, *Eurostat*, 1984; *Food Consumption, Prices, and Expenditures, 1962-82*, USDA, Economic Research Service, 1983; *Statisticheskii ezhegodnik stran-chlenov soveta ekonomicheskoy vzaimopomoshchi* (Moscow: 1983).

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Table 2
USSR: Per Capita Consumption of Selected Foods

Kilograms

	1965	1970	1975	1976	1977	1978	1979	1980	1981	1982	1983
Meat ^a	37	44	52	51	51	52	53	53	53	53	53
Milk and milk products	251	307	316	316	321	318	319	314	305	295	309
Eggs (units)	124	159	216	209	222	232	235	239	245	249	253
Fish	12.6	15.4	16.8	18.4	17.1	17.1	16.3	17.6	17.9	18.4	17.6
Sugar	34.2	38.8	40.9	41.9	42.4	42.8	42.0	44.4	43.9	44.5	44.2
Vegetable oil	7.1	6.8	7.6	7.7	8.1	8.3	8.4	8.8	9.0	9.3	9.6
Potatoes	142	130	120	119	120	117	115	109	105	110	110
Vegetables	72	82	89	86	88	92	98	97	98	101	101
Fruit	28	35	39	39	41	41	38	38	40	42	44
Bread and cereal products	156	149	141	141	139	140	138	138	138	137	136

^a Meat is on a carcass-weight basis and includes edible offals. Soviet official meat consumption numbers were adjusted to exclude slaughter fat.

Source: *Narodnoye khozyaystvo*, various years; *SSSR v tsifrakh*, 1983.

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Introduction

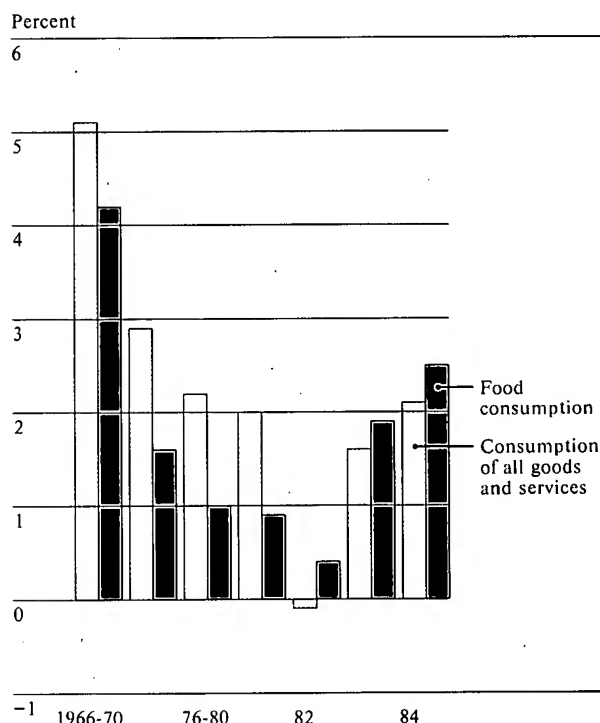
The diet is the single most important determinant of consumer welfare in the USSR, both in the perceptions of the population and in Soviet and Western measures of Soviet consumption. Taken together, food availability in relation to demand, the quality of the diet, and the leadership's handling of food issues have important implications for social stability.

At the November 1981 plenum of the Communist Party of the Soviet Union, General Secretary Brezhnev referred to the food problem as "the most pressing political and economic issue to be addressed in the 1981-85 period." Brezhnev was alluding not to malnutrition but to the disparity between the generally adequate but bland, monotonous diet and consumer preference for a more varied and higher quality diet (more meat, dairy products, fruits, and vegetables) like that enjoyed in Western industrialized societies and in some parts of Eastern Europe (table 1).

Disappointed by both the USSR's failure to increase the availability of quality foods since the mid-1970s (table 2) and the slow growth in consumer welfare in general (figure 1), Brezhnev announced in May 1982 a decadelong Food Program. The program focused on upgrading and integrating the activities involved in food production, processing, and marketing. Brezhnev's successors, Andropov and Chernenko, endorsed the Food Program and took steps to implement it.

This paper describes the nature and consequences of changes in the quantity and quality of the Soviet diet since 1965, with special reference to the 1979-82 period, when increases in the provision of highly desired foods slowed markedly. It also discusses leadership responses, particularly the allocational changes since 1982 that have resulted in the amelioration of certain aspects of food shortages and thereby dampened discontent. Finally, it assesses the likelihood of reaching the goals for per capita consumption in 1990 and the extent to which such progress will relieve a troubling and longstanding inability to provide a diet that Soviet consumers would prefer.

Figure 1
USSR: Average Annual Per Capita Growth in Total and Food Consumption, 1966-84^a



^a The index of consumption underlying these growth rates is constructed by using 1970 expenditure weights and consumption indexes for 11 major categories of goods and services. Where possible, the indexes are based on physical quantities consumed. The food consumption index, for example, is largely based on Soviet per capita consumption data in kilograms. Where these figures are not available, physical production data and deflated retail sales are substituted.

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Overview of Food Supplies, 1979-84

Tauter Supplies, 1979-82

From late 1979 through 1980, the gap between the demand for and supply of livestock products and some

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other foods appeared to be widening markedly. [] consumers increasingly had to endure long waits at food stores, often of several hours, and that suppliers frequently ran out of stocks before all could make their purchases. The reports indicated that the phenomenon of increased queuing was general and widespread—occurring in most republics, in both rural and urban areas, and in cities of all sizes. During this time, several factors seem to have converged, all contributing in varying degrees to widening the gap between demand and supply. []

First, Soviet statistics show that the quantities of meat and milk products recorded as sold in state and cooperative stores changed little from 1979 to 1980 (figure 2). Total meat, milk, vegetables, potatoes, and sunflower seed marketed by agriculture declined in 1980. Moreover, during the winter of 1979/80 and throughout the year, procurements of meat and milk from state and collective farms were generally lower than those of the corresponding periods in the preceding year. This decline in procurements, although supplemented by large imports, probably led to more erratic deliveries of meat and milk products to many regions (figure 2).¹ Only egg production and consumption grew steadily during this period. []

While supplies of most quality foods faltered, per capita personal disposable incomes increased sharply in 1980, thereby increasing the demand for quality foods (figure 2). Consumers—uneasy over reports of a poor year for agricultural production—began to hoard supplies, thus exacerbating pressure on available supplies. As queues lengthened at state stores, consumers increasingly turned to collective farm markets (CFMs), where private farmers sell their surplus production at prices that generally vary according to supply and demand.² Partly as a result of this increased consumer demand, prices rose sharply in CFMs (figure 2). In response to the excess demand for livestock products, moreover, black-market activity increased, which probably caused further diversions from state store supplies. []

¹ For the USSR as a whole, the per capita availability of meat (including producers' own consumption and collective farm market sales) remained the same while that of milk declined by 2 percent from 1979 to 1980. Additional demand pressure was generated by income growth. Hoarding also played a role. []

² In state retail and cooperative stores, food prices are fixed at relatively low levels. Despite food shortages, Soviet leaders have maintained the longstanding official policy against raising retail food prices. []

The poor agricultural performance in 1979 manifested itself during the ensuing winter and spring in ever-lengthening queues for various quality foods. In the spring and summer of 1980, worker discontent—at least partly the product of food shortages—escalated into work stoppages at some large plants. The leadership responded in part by sending in special shipments of food. By the late summer and fall of 1980, events in Poland and the likelihood of a mediocre harvest had heightened the leadership's anxiety. These disturbances were especially troublesome for some regional party leaders, who had to contend with social tensions generated by ethnic and cultural factors as well as the more general consumer dissatisfaction manifested in worker apathy and strikes. []

In 1981 the situation worsened. Milk and vegetable marketings registered another decline. Per capita milk consumption fell, and per capita meat consumption was slightly lower than in 1980. Queuing at retail stores became so widespread that informal rationing of meat and milk products was imposed in 1981. The situation stabilized in 1982. []

Improved Availability, 1983-84

By the end of 1982, production and marketing of major farm products were recovering somewhat from 1980-81 lows. The recovery continued in 1983 and—together with large imports of grain, meat, fruits and vegetables, vegetable oil, and sugar—led to an upturn in food availability in 1983. Further gains occurred in 1984. Vegetable production rose. In addition, meat and milk output reached new highs of 16.7 million tons and 97.6 million tons, respectively. []

The degree to which increased availability from production and imports translates into gains for the consumer is unclear, because some of the product is channeled into inventories and end uses other than consumption. For example, Soviet statistics show that per capita consumption of dairy products fell in 1982 despite a rise in milk production that would have permitted an increase. In 1983, production gains could have supported somewhat greater meat consumption than occurred. Increases in milk fed to animals and a rise in inventories of processed dairy products could account partially for the discrepancy

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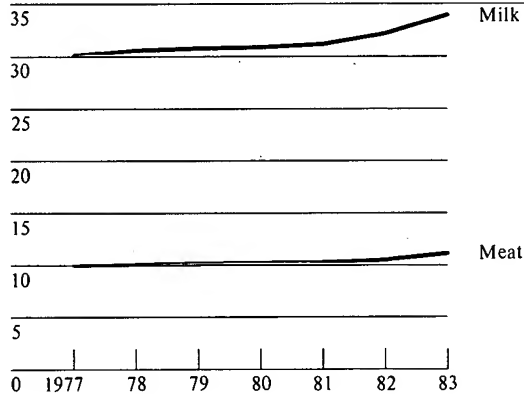
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Figure 2
USSR: Food Supply and Demand Overview, 1977-83

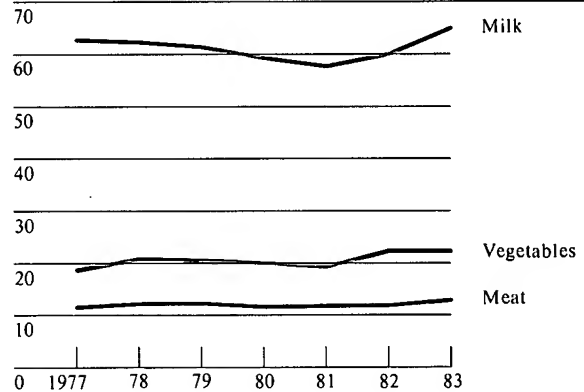
State Retail and Cooperative Sales of Meat and Milk, 1977-83^a

Million tons



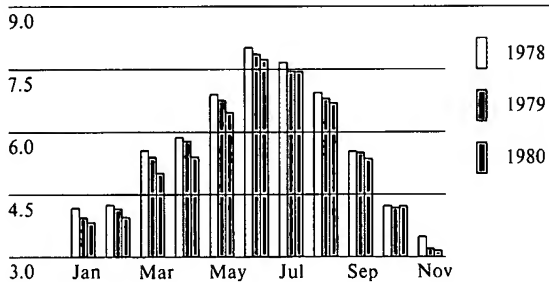
Marketed Output From Agriculture, All Sectors, 1977-83^a

Million tons



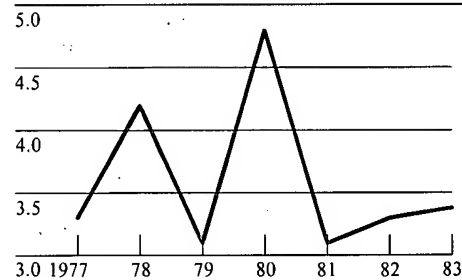
Monthly Milk Procurements From State and Collective Farms, 1978-80^b

Million tons



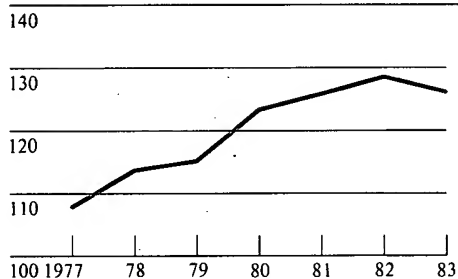
Growth in Per Capita Personal Disposable Money Income, 1977-83^c

Percent



All Union Collective Farm Market Price Index, 1977-83^a

Index: 1975=100



Sources

^a Reported in or calculated from data in *Narodnoye Khozyaystvo*, various years.

^b *Ekonomicheskaya Gazeta*, various years.

^c SOVA calculation.

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Table 3
USSR: Changes in
Per Capita Consumption, 1980-83

Kilograms

Food	Change
Meat	0.8
Milk	-5.0
Eggs (units)	14.0
Fish	0
Sugar	-0.2
Vegetable oil	0.8
Potatoes	1.0
Fruit	4.0
Vegetables	6.0
Bread	-2.0

in the case of milk, while that for meat could have resulted from efforts to rebuild depleted inventories.

Despite uncertainties as to the extent of increased consumption, numerous reports have indicated that, because of increased supplies in retail outlets and collective farm markets, queuing diminished somewhat. According to a Radio Free Europe-Radio Liberty survey of 358 recent Soviet emigrants, by the second half of 1983 the availability of food products had returned to the 1981 level; fruits and vegetables showed the largest gains. The improvement appears to have been concentrated mainly in second half 1983. Meanwhile, prices reportedly were stable in state stores. In 1983, however, all-union CFM prices (figure 2) declined only slightly, indicating that supply-demand gaps for quality foods did not narrow appreciably.

As a result of increased production since 1982 and continuing high levels of food imports, some growth in the per capita availability of meat, eggs, vegetable oil, vegetables, and fruit has occurred (see table 3). The per capita availability of milk and sugar in 1983, however, was still below the 1980 level. Overall, per capita consumption of food in 1983 was nearly 3 percent higher than in 1980 (we used 1970 food consumption weights in established prices as the basis

for measurement). Nearly all the growth occurred in 1983 (figure 1). Per capita consumption of food probably increased by 2 percent in 1984.

In recent years, meat imports have accounted for 2 to 4 kilograms (kg) of per capita consumption. If imports were maintained at 1983 levels and if production targets were met, the amount of meat available to consumers per capita (after adjustment for losses between farm and consumer) increased by about 0.5 percent in 1984. Such an increase, however, would still not match the demand for meat generated by increases in purchasing power, according to our calculations. Several years of rapid growth in meat availability will be required to fulfill the demand that has built up as a result of the stagnation in the per capita level of meat supplies and the continued increase in disposable money incomes.

Nonetheless, the resumption of some progress in raising consumption of food, and especially quality foods, probably strikes the leadership as a considerable achievement even though food imports remained high. The population, too, probably recognizes that food supplies have improved; we have had only two reports of strikes or civil disturbances occasioned by food shortages in 1983 and 1984, a marked reduction from the number received in the 1980-82 period.

How the Leadership Responded

Investment Policy and the Food Problem

Brezhnev's legacy to Andropov included the consequences of four consecutive years of poor agricultural performance, a new farm policy already complicated by bureaucratic discord, a heavy resource burden, large hard currency outlays, and sizable and growing subsidies to maintain stable retail food prices. (See appendix A for a discussion of farm policy under Khrushchev and Brezhnev.) Furthermore, the need to improve agricultural performance was but one of the difficult and complex economic challenges Andropov faced in an environment of slower economic growth and keen competition for limited investment resources.

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Andropov chose to support the Food Program despite its decadelong time frame and high cost. Why he did so is not clear. He may have calculated that the political and economic costs of devising, obtaining consensus on, and implementing an alternative farm policy would be even greater. Not the least of the costs associated with a shift in policy might have been disruptions in food production that would add to the irritation of a population already far from pleased with the irregular supply of quality foods. Finally, he may well have been hoping for favorable weather to complement continued investment in agriculture and to boost production sufficiently for the regime to claim success for the Food Program. [REDACTED]

If the leadership maintains the commitment to the level of investment specified in the Food Program—Chernenko had reaffirmed his support for the Food Program at the March 1984 All-Union Agro-Industrial Conference and at the October 1984 special plenum on agriculture³—and does not curtail these allocations in favor of defense or industrial development, little flexibility will exist for accelerating development in other sectors of the consumer economy. Until the Food Program pays a return in the form of a higher and more stable level of production, significant diversions of investment, for example, to the production of consumer soft goods and durables and for the expansion of services are unlikely. [REDACTED]

Other Ways of Coping

Recognizing that the Food Program would be slow to achieve its long-run potential, both Brezhnev and Andropov also sought to relieve shortages by other means. First, Moscow has consistently tried since the early 1970s to dampen the growth of purchasing power to match the slower growth in the availability of consumer goods. This effort has had considerable success.⁴ In addition, the leadership has publicly played down consumer expectations, granted special food allocations to factories and other worksites while introducing rationing, given greater support to the private agricultural sector, and imported huge quantities of grain and foodstuffs. [REDACTED]

³ The 23 October 1984 plenum on agriculture was mainly focused on a program to increase stocks of irrigated and drained land in agriculture to support Food Program goals. [REDACTED]

Controlling Expectations. The Soviet leadership has only recently addressed the problem of consumer expectations. In discussing food issues, the leadership began to admit problems, stopped promising quick solutions, stressed long-term improvements, and shifted some of the blame to poor worker performance. In his generally upbeat speech at the fall 1980 party plenum, Brezhnev publicly acknowledged shortages of meat and milk. Soon after, at the 26th CPSU Congress in February 1981, Brezhnev again fretted over consumer problems and pinned some of the blame on poor worker performance: "Whoever wants to live better must work more and better," he warned. Half a year later, at the fall 1981 plenum, he characterized the "food problem" as the "central economic and political problem" to be addressed in the 1981-85 period. In announcing the Food Program in May 1982, he extended the agenda to 1990. [REDACTED]

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Within three months of taking power in late 1982, Andropov unleashed a discipline campaign that aimed at punishing workers for absenteeism, drinking on the job, and poor performance. Andropov's administration gave more emphasis to tying remuneration to performance, particularly for farmworkers. At the June 1983 plenum, he declared that growth in consumption would be slow. In general, Andropov was careful not to promise more than the eventual achievement of "reasonable" consumption levels; in his one publicly released speech on the Food Program (April 1983), he stressed the "still slow" progress in agriculture. The end of the speech delivered for him at the December party plenum briefly noted that some improvements in food availability had occurred in 1983 and that there was "hope for a further change for the better next year too." [REDACTED]

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Chernenko's speeches generally emphasized balance. For example, his maiden speech as General Secretary in early 1984 stressed continuity with Andropov's policies; he promised no swift progress in consumer welfare but did say that "much is being done now" to increase the supply of quality foods. His emphasis upon balance also appeared when, on the one hand, he criticized the present wage and bonus system for lacking "proper fairness," but, on the other, repeated

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Brezhnev's and Andropov's refrain—"Never forget one simple truth: whoever wants to live better must work more and better." [redacted]

We believe that these efforts to restrain consumer expectations, together with the Soviet populace's grudging acceptance of the enduring realities of shortages and long lines, has resulted in a general lowering of expectations. Four years of growing gaps between supply and demand for meat, milk, butter, and many types of fruits and vegetables have led to adjustments in popular attitudes. Initial anger and surprise at increased queuing and rationing have given way to resignation and weary acceptance. Some have turned to the black market, others have decreased their intake of certain quality foods. In cities gardening has increased, while in rural areas private farming has increased somewhat. The average citizen, however, while accepting the fact that prosperity is a long way off, probably tends to blame the system to a greater degree than before. [redacted]

Changes in Allocation and Distribution. The Brezhnev leadership seemed to realize that promoting unrealistic expectations might endanger social order. But it clearly did not believe that greater circumspection in promises to the public would be sufficient to end food-related unrest among workers in industrial installations. [redacted]

The leadership saw an opportunity both to raise the prestige of trade unions and to pacify workers unhappy with queuing by arranging for special distributions of food at the workplace. Although special stores for an elite have long characterized the Soviet system, food distribution at important factories or prestigious institutions is a phenomenon of the middle and late 1970s. Factory managers and institute directors first made special arrangements with retail authorities to provide supplies on a regular basis to ease the burden of queuing and thus to improve morale and reduce absenteeism. In 1980, trade unions were ordered to help. Although we do not know the share of various foods that was distributed through these channels, the practice was so prevalent, [redacted] that every workplace in the country sold special food packages to employees at least on major

Soviet holidays. And, in some cases, special distribution developed to the point that employees could choose from regularly alternating lists in selecting food packages. [redacted]

In addition to putting pressure on retail supplies available to the general public, food distribution at the workplace competed with the special priority enjoyed by hospitals, schools, and child-care centers. Food supplies to such institutions were sometimes curtailed, and complaints surfaced in the press. In some localities, however, the high priority of these institutions was maintained, according to emigre reporting. While some general allocation rules pertain to every oblast—for example, certain specified amounts of locally produced foods must be delivered to all-union stocks⁵—the allocation within the oblast of the remainder depends on the decisions of local party and retail trade authorities and the relative strength of various interests. [redacted]

Food allocations to a workplace are based on the facility's importance to the government (defense-related industries, for example, appear to have high priority). Within the workplace, precedence is often given to the shopworkers—apparently on the theory that the better educated technical and engineering personnel are less likely to cause trouble than lowly placed workers with little advancement potential. Factory and trade union officials promote these perquisites for their workers, not only because they alleviate disgruntlement and reduce absenteeism but also because they help to attract and keep good workers. [redacted]

Under Andropov, who considered direct food allocations to be effective in heading off discontent, emphasis on the practice continued, but with a new twist. The retail trade network was ordered to locate most new stores at or near factories and farms, and the emphasis upon workplace siting carried over into other consumer-oriented facilities as well. [redacted]

⁵ From all-union stocks, food supplies are allocated to the military or to government reserves or are redistributed to various regions. [redacted]

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Table 4
USSR: Estimated Changes in Supply of
and Demand for Selected Quality Foods ^a

Percent

	1976-82 ^b		1983-90 Projections			
	Demand	Supply	Based on Soviet Plans ^c		Based on CIA Estimates ^d	
			Demand	Supply	Demand	Supply
Meat ^e	30	19	22	23	22	14
Milk ^e	30	10	22	14	22	14

^a For all calculations, it was assumed that the income elasticity of demand for these products is one. (If elasticity were exactly one, consumers' spending on these products would increase by the same percentage as their incomes. If it were greater than one, spending on these products would be rising at a faster rate than income.) Expenditures in state retail, the cooperative system, and collective farm markets are included in these calculations.

^b Takes into account actual price changes in meat and milk products in 1976-82.

^c Assumes that consumption is at planned levels, prices do not change, and incomes grow as planned through 1985 and at rates slightly lower in 1986-90 than in 1981-85.

^d Assumes that consumption depends on domestic output that grows at average annual rates of the 1960-83 period, prices do not change, and incomes grow as planned through 1985 and at rates slightly lower in 1986-90 than in 1981-85.

^e Including products derived from meat (for example, sausage, canned meat) and milk (for example, cheese, butter, ice cream).

Another channel for providing food benefits to employees at the workplace is the cafeteria system, which provides hot meals at low cost during the meal break. The 11th Five-Year Plan, released in the fall of 1980, called for major expansion of this system, and the Food Program asked every ministry to establish a system of "industrial subsidiary farms"—factory-run, usually small-scale crop and livestock operations—to provide food to factory kitchens. Although such operations are highly inefficient by Western farming standards, the Brezhnev and Andropov leaderships seemed to think the benefits of providing additional food to workers worth the costs.⁶ These farms increased from about 13,000 in early 1981 to 20,000 in early 1984; they account for between 2 and 3 percent of total meat output and about 0.5 percent of milk output.⁷

Food distribution at the workplace is likely to become a long-term feature of Soviet life. Oblast and rayon retail trade officials routinely set aside specified shares of their food supplies for designated workplaces. The process will be further institutionalized by

⁶ The costs include the material assistance from local farms and labor for livestock raising. The labor component of cost may be offset to some degree because idle labor can be put to use on the factory farm during slack periods in a plant's activity.

⁷ *Survey of World Broadcasts*, 27 January 1984; *Planovoye khozyaystvo*, No. 11, 1982; *Sovetskaya trgovlya*, 10 March 1983.

construction of new retail outlets at large factories and enterprises.⁸ The workplace allocation system will become part of the already complex distribution system that provides more supplies on a per capita basis to cities designated "Hero Cities" for their suffering in World War II, to areas having priority development projects such as the Baikal-Amur Main-line Railroad, and to certain cities frequented by tourists. Informal rationing of quality foods in the state retail system is likely to continue for at least several years because pressures of excess demand will remain high. Income growth is likely to keep pace with, if not surpass, growth in quality food supplies through the 1980s, with no diminution of supply-demand gaps (table 4). Consequently, incentives for factories to retain their special channels will remain.

Greater Support to the Private Agricultural Sector. In early 1981 Brezhnev issued a decree—reaffirmed in the 1982 Food Program—ordering state and collective farm managers to provide more assistance to

⁸ Small convenience stores run by the Workers Supply Department of the Ministry of Trade have long existed. Initially, their mission was to stock workclothes and toiletries.

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private farmers. Performance in the private agricultural sector improved marginally in 1981 and 1983, and private livestock herds increased. Although the private sector's need for more resources remains acute, some progress in supplying needed inputs has occurred. The climate of encouragement is likely to endure for some time because the leadership recognizes the large contribution that the private sector makes to gross agricultural output—approximately one-fourth. []

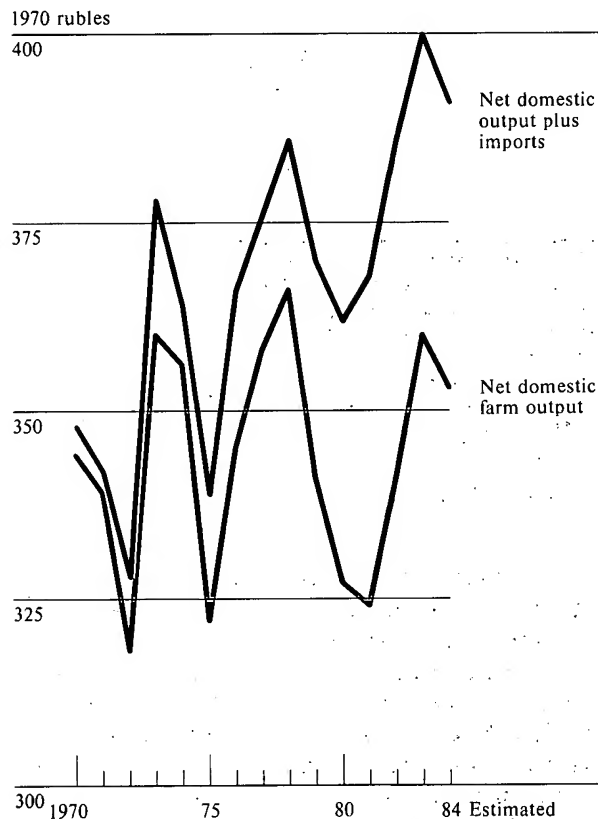
Foreign Trade as a Safety Valve. After 1978 a series of below-plan grain harvests, erratic production of other crops, inadequate forage for livestock, and stagnating production of most livestock products led the USSR to increase sharply its net imports of agricultural products, particularly grain and meat. Without these imports, the per capita availability of farm products after 1978 would have receded to levels near those of the 1970-72 period (figure 3). []

Although Moscow probably regarded reliance on increased imports of grain and foods as temporary, the continuing problems in the agricultural sector have made imports of grain and foods an important component in the USSR's longer term growth strategy. The share of net imports in the per capita availability of net farm product grew from 1 percent in 1970 to 12 percent in 1981 and 1982.⁹ Unless very large and unlikely gains in production of grain and several other agricultural products occur in the remainder of the 1980s, Moscow will not be able to cut these imports and still obtain planned growth in consumption of meat and several other quality foods. []

Approaching the issue from another point of view, we estimate that 13 percent of the per capita daily caloric intake in 1981 originated from the net imports of

⁹ It is estimated that the share of imported processed foods in Soviet state retail sales in 1981 was 12 percent, up from 4 percent in 1970. In the United States, the share of retail food expenditures originating from imported foods amounts to 15 percent and reflects demand for products that cannot be produced in a temperate climate (coffee, tea, cocoa, spices, bananas), together with some foods that are produced more efficiently abroad (sugar, some dairy products, grass-fed beef, some fruits, vegetables, edible oils, and beverages). The share would be higher if there were not import restrictions on selected foods such as sugar and meat. *Economic Report of the President*, February 1984, Washington, DC. []

Figure 3
USSR: Per Capita Availability of
Farm Products, 1970-84



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processed foods and livestock feeds.¹⁰ In 1970, the share was less than 1 percent. This increase does not mean that the intake of basic food energy depends on

¹⁰ One Western economist has calculated that the share of calories from imports in per capita daily caloric consumption in 1981 was nearly 20 percent. His estimate was made on the assumption that most imported grain was used to produce flour for human consumption. We believe, however, that, because the USSR produces far more grain than it needs for human consumption, the imported grain has been used—directly or indirectly—to augment livestock feed supplies and that grain imports were thus consumed in the form of meat and milk. []

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imports; rather it indicates a shift in the structure of the diet away from starchy staples toward more expensive and high-quality foods. If the Soviets were to cease importing meat, fruit, and vegetables, as well as the grain and soybeans to produce additional meat and milk, the lost calories could be replaced from domestically produced starches. []

Implications of the Present Situation

The overall improvement in supplies has not displaced the food situation as a front-rank policy issue in the USSR. Although there was some turnaround in 1983-84, planners still must struggle to maintain balance between consumer purchasing power and the availability of particular foods. They are also anxious to reduce food imports. Moreover, the government must contend with an erosion in the quality of some foods and substantial continuing differences in regional consumption levels. []

Supply and Consumer Preferences

Although more than adequate in calories, the structure of the food supply still does not conform to consumer preferences. Consumers would eat more meat, milk and milk products, fruits, and vegetables if these were available in greater quantity.¹¹ A wider assortment within major categories of foods would also give consumers greater satisfaction. Choices are frequently extremely limited. For example, when stores offer fresh fruit, the fruit is most often apples; the offerings on vegetable counters often include only cabbage, carrots, and onions. Distortions even appear within some general categories of foods for which supply is adequate (such as bread and bread products); rye bread, for example, is not produced in sufficient quantity to satisfy consumer demand, given the officially fixed differential between prices for rye bread and the relatively more expensive wheat-based breads. []

Meanwhile, growth in per capita disposable incomes has continued. It was 30 percent higher in 1982 than in 1975, but per capita availability of meat remained

¹¹ For example, family budget surveys recently conducted by Soviet economists show that preferred annual per capita meat consumption is 88 kg, while the present level is 56 to 58 kg. *Sovetskaya Rossiya*, 25 September 1983. []

at its 1975 level and that of milk (fluid milk and other dairy-based products) was lower than in 1975. Per capita availability of fruit and vegetables improved in 1982 after decreasing in 1980 and 1981 from earlier peak levels. The result—as noted earlier—has been off-and-on queuing and rationing for these quality products. []

Although official policy insists on stable food prices (and posted retail prices have not been raised in this period), higher average prices paid for quality foods in certain categories have narrowed the gaps between supply and demand.¹² The rise in average prices paid by consumers reflects several factors, including a shift in the assortment of purchases toward higher priced items. An increase in the share of goods purchased through cooperative marketing channels and hidden price increases implemented in introducing new processed food products have also led to higher average prices. The average price for a kilogram of meat or meat product sold in the retail and cooperative marketing networks increased 17 percent between 1975 and 1982; the average price of a kilogram of milk or milk product increased by 3 percent. Our estimated changes in supply-demand gaps for some quality goods for the 1976-82 period show that inflation in prices of quality foods helped to narrow the gap between consumer demand for and supplies of meat and milk products (see table 4). []

Losses or diversions in the chain of production, end use, storage, distribution, and packaging have kept the per capita availability of various foodstuffs below attainable levels and have contributed to imbalances between supply and demand. Some examples of diversion follow:

- Although the USSR produces more milk per capita than most countries, a relatively large share, more than 10 percent, is fed to young animals. In 1982,

¹² One result of stable prices for foodstuffs has been a large increase in state subsidies to cover the difference between the cost of producing and marketing meat and dairy products and the cost to consumers at retail. These subsidies amounted to more than 40 billion rubles in 1983, almost precisely as much as was invested in agriculture and its supporting industries. []

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milk fed to animals was equivalent to over 40 kg of whole milk per capita.¹³

- An even larger share of the fruit and berry crop is diverted to production of wine and other alcoholic beverages.¹⁴ The share of domestic production of fruits and berries used for industrially produced wines and champagnes has been between 30 and 40 percent in the years since 1965; in 1981, fruits and berries used for alcoholic beverages (some 37 percent of domestic production) amounted to the equivalent of over 20 kg per capita. (Per capita consumption of fruits and berries in fresh equivalent that year was 40 kg.) []

The gap between supply and demand for many foods could be narrowed—especially the seasonal variations—if waste and losses were reduced. According to the figures of the State Planning Committee (Gosplan), losses of vegetables (including potatoes) during storage, procurement, and transportation to retail outlets amount to 15 to 20 percent of the gross production of those crops; losses of fruits, 15 to 18 percent. Other Soviet sources put the losses for meat and milk at 10 percent of gross output.¹⁵ Losses result from many factors, including the lack of packaging materials for both retailing and shipping, faulty transport equipment and increasingly long hauls, poor roads, and insufficient storage facilities and refrigeration equipment. (An unknown, but probably substantial, part of the loss written off to spoilage is due to theft.) []

According to our calculations, only 8 percent of the per capita consumption of fruits and vegetables (including potatoes) in the Soviet Union is in processed

¹³ As a result of feeding whole milk and the returned industrial byproducts of milk to animals, in 1981 the average calf consumed 252 kg of whole milk and 423 kg of skim milk, buttermilk, and whey (*Planovoye khozyaystvo*, Nos. 3 and 8, 1983; *Voprosy ekonomiki*, No. 6, 1983). Feeding norms require certain amounts of whole milk or milk substitute in rations for young animals, but actual amounts fed exceed the norms. []

¹⁴ Official Soviet statistics on consumption of fruits and berries do not include amounts used for production of alcoholic beverages. Official policy in recent years has been to shift consumption of alcoholic beverages away from hard liquor to wine and beer. In addition, the procurement price structure encourages farms to produce fruits and berries more suitable for wine making than for fresh consumption. []

¹⁵ *Sovetskaya trgovlya*, No. 3, 1982; *Ekonomicheskoye nauki*, No. 10, 1981. []

form (canned, frozen, or dehydrated).¹⁶ In the United States, by contrast, about 30 percent of the per capita consumption of fruits, vegetables, and potatoes is in processed form.¹⁷ Because early varieties are a small share of total production in the USSR, only 3 percent of the potatoes and 8 percent of the other vegetables are procured by state marketing organizations before July. Gluts of these products then occur from late summer through the fall, followed by shortages in the winter and spring.¹⁸ The selection of seasonal fruits and vegetables in retail outlets is narrow. Although the food industry's output of processed fruits and vegetables has increased substantially since the mid-1960s, most of the growth occurred in the 1966-70 period; growth declined sharply in the following years.¹⁹ Per capita consumption of processed fruits and vegetables, including potatoes, is now twice as high as in 1965 but nevertheless remains low in comparison with that of other developed countries. []

Factors Degrading Food Quality

Shortages of quality foods have been aggravated by the deteriorating quality of some individual food-stuffs. Low quality, particularly of perishables sold through state stores, has always been a problem, but in recent years the quality of certain foods seems to have slipped further.²⁰ For example, food industry officials claim that the fruit and vegetable canning industry has experienced problems with product quality largely because the quality of vegetables and fruit delivered to it has declined. They say that 20 percent of the vegetables and 40 percent of the fruits received in the 1976-80 period were substandard. Efficiency

¹⁶ This figure does not include fruits, grapes, berries, or other materials used in wine or alcohol production. According to our calculations, about 15 to 17 percent of the processed fruits and vegetables consumed per capita is imported. []

¹⁷ Data derived from *Food Consumption* (Washington, DC: US Department of Agriculture, Economic Research Service, 1983), No. 702. []

¹⁸ *Zakupki sel'skokhozyaystvennykh produktov*, No. 7, 1983. []

¹⁹ Output of processed fruits and vegetables in 1982, however, showed strong growth. []

²⁰ *Razmesheniye pishchevoy promyshlennosti, SSSR*, Moscow, 1983. []

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has dropped because more raw material has been needed to compensate for spoiled produce.²¹ []

The recent erosion in the quality of some foods originated largely in the agricultural sector. For example, as the average weight of animals sold to the state for slaughter dropped, the proportion of bone to meat in the animal carcass rose. Because little bone is discarded during the trimming process, consumers receive relatively more bone in their meat purchases. From 1978 to 1982, the average liveweight of cattle sold to the state for slaughter dropped from 361 kg to 340 kg, that of pigs from 105 to 100, and that of sheep and goats from 38 to 35. In 1983 and the first few months of 1984, however, the liveweights of cattle and pigs sold to the state increased, although cattle weights did not reach the peak of early 1979. []

In addition, complaints about watery milk have become increasingly common. Soviet statistics show that the fat content of milk sold to the state has declined. Reports appearing in the Soviet press have asserted that farm workers and retail clerks dilute milk to meet output and sales targets.²² The fat content of butter has fallen even more sharply, indicating that more butter has been produced from less milk. Industrially produced butter (over 90 percent of the total output) includes a growing share of varieties with low-fat, high-water content; the share rose from roughly 50 percent in 1974 to 90 percent in 1979. Although perhaps desirable for cardiovascular health, low-fat butter may have a less satisfactory texture and taste.²³ The quality of tea is also deteriorating according to CPSU Secretary Shevardnadze of the Georgian Soviet Socialist Republic, where most of the USSR's tea is grown.²⁴ []

²¹ Sanitary conditions in Soviet wholesale and retail trade are poor in comparison with those in the United States and Western Europe. Although state standards are high, equipment for proper storage often is lacking. Bribery of health inspectors is common, and fines, even when assessed, are low—10 rubles per violation. Part of the problem results from the shortage of packaging. Although the food-processing industry is required to produce clean products, it must often ship them in bulk in the holds of ships or in unclean railroad freight cars. Debris, such as dirt and stones, often turns up in retail supplies of rice, flour, and salt. []

²² *Kadry sel'skogo khozyaystva*, No. 2, 1982. []

²³ The share of low-fat milk and cheese in industrial processing is also increasing. *Molochnaya promyshlennost'*, No. 5, 1980. []

²⁴ *Zarya Vostoka*, 16 April 1982. []

For several years, complaints in the Soviet press have indicated that the quality of bread and other baked goods has declined. Consumers are particularly sensitive to changes in bread quality. According to a recent article in the authoritative party journal *Kommunist*, "Alarming symptoms revealing the low quality of the bread baked in many republics and oblasts have appeared." Food industry officials blame the falling gluten content of the available wheat. According to a deputy minister of the food industry, in 1981 almost half of the flour delivered to the baking industry was substandard.²⁵ []

In many respects, the Soviet food processing industry lags far behind its Western counterparts in the application of food technology. The output of frozen vegetables (freezing preserves appearance and nutrients better than canning, fermenting, or drying) amounts to 4,000 tons a year for the entire USSR—about 0.01 kg per capita—and the annual output of industrially processed potatoes is only about 135,000 tons—or about half a kilogram per capita.²⁶ []

Quality may improve as the agricultural sector recovers from four years of poor weather and as it absorbs improvements in agricultural technology and infrastructure. Food processing (including more packaging) is likely to continue to increase slowly and, over time, to improve the quality of food that reaches consumers. []

Positive Influences on Food Quality

The Soviets are well aware of their problems with food quality. In addition to investing in storage and transportation, the Food Program calls for a substantial re-equipping of the food-processing industry in the 1980s. Large increases in the output of processed baby foods, enriched food products, and canned and frozen foods are planned.²⁷ []

²⁵ *Nedelya*, 21-27 June 1982, p. 6. Flour delivered from the milling industry varies so much in quality that most baking enterprises have to frequently test the flour quality and conduct trial bakes, which often leads to changes in production methods. []

²⁶ *Ekonomika i organizatsiya promyshlennogo proizvodstva*, No. 10, 1981. US per capita yearly consumption of frozen vegetables including potatoes is 13 kg. []

²⁷ *Ekonomicheskaya gazeta*, No. 28, 1982, p. 2; *Ekonomika sel'skogo khozyaystva*, No. 11, 1982. []

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Improvements in food processing already have led to greater nutritional quality in some food products. Consumers have gradually been provided a greater amount and wider variety of industrially processed foods. From 1965 to 1981 per capita consumption of industrially processed fruits and vegetables rose from 9.7 kg to 19.8 kg; of cheese, from 1.4 kg to 2.5 kg; of vegetable oil, from 7.1 kg to 9 kg; and of sausage, from 7 kg to 11.5 kg. A greater assortment of bakery products, cheeses, and canned goods is now produced.

Most of the meager progress in improving quality is due to food enrichment, but much remains to be done. In most developed countries, processed foods have been enriched routinely for many years. Food enrichment in the USSR, however, is a recent development.²⁸ Only a tiny share of industrially processed milk, for example, is fortified with vitamin D.²⁹ If consumers are to increase their intake of nutrients without increasing what already appears to be a relatively high intake of calories, more foods rich in protein, fiber, vitamins, and minerals must be provided.

Vitamin fortification has generally proceeded at a snail's pace. For example, a joint party-state resolution issued in 1960 and a USSR Ministry of Health directive issued in 1972 ordered the fortification of flour and some other foods with several vitamins. By late 1981, however, so little had been done that an all-union conference on nutrition sponsored by the presidium of the Academy of Medical Sciences concluded a new decree was needed. The conference report suggested mandatory fortification of flour, sugar, milk, and fruit juices. It noted that fortification is hampered by the insufficient industrial production of vitamins and vitamin preparations and by the absence of an authoritative organ to organize and coordinate the various organizations and departments involved.³⁰

Examples of improvements in the nutritional content of foods being offered to the population include the following:

- Whey, a byproduct of milk processing, is added to about two-thirds of the bread and bakery products,

²⁸ *Voprosy pitaniya*, Nos. 4 and 6, 1982.

²⁹ *Molochnaya promyshlennost'*, No. 5, 1980.

³⁰ *Voprosy pitaniya*, No. 4, 1982.

providing calcium and vitamin A.³¹ In certain proportions, they might somewhat increase amounts of iron and B vitamins, the substances used to enrich flour in the United States.

- The food industry now produces small amounts of edible vegetable protein for use as additives in processed meats, baked goods, and other products.³² In recent years the USSR has been importing small quantities of soy protein for use as a food extender and enricher. (Imports of soybeans and soybean meal are used as animal feed.) The Ministry of the Meat and Dairy Industry is planning to increase the share of soy protein extender in sausage.³³

- In 1981, 4 percent of margarine output was fortified with vitamins A, D, and E; in 1982, 10 percent. Low-calorie table margarine, which contains 40- to 60-percent fat instead of the standard 82 percent, is taking a growing share of margarine production.³⁴

- Although serious problems continue in infant nutrition (see appendix B, "Infant Nutrition—A 'Food Problem'"), the construction of plants to produce infant formula has helped to relieve the problem of supplies. Special products for children intolerant of lactose have been developed and are in production.³⁵

Regional Differences

The availability of various food products and per capita daily caloric levels vary substantially among regions in the USSR (see tables 5 and 6). The Ukraine and Belorussia have the highest caloric levels, while the Central Asian republics trail well below the average levels for the USSR. The differences can be attributed to preference (which varies among ethnic groups), to climate (caloric requirements tend to be somewhat less for southern regions), to age structure (per capita daily caloric requirements are less in groups with higher proportions of infants and children), as well as to regional differences in incomes and

³¹ *Torgovlya i bytovoye obsluzhivaniye, Tsena-kleba*, Znaniye, Moscow, 1983.

³² *Summary of World Broadcasts*, 27 January 1984.

³³ *Izvestiya*, 27 May 1981.

³⁴ *Maslozhirovaya promyshlennost'*, Nos. 1 and 6, 1983.

³⁵ *Vestnik Akademii meditsinskikh nauk SSSR*, No. 11, 1982.

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Table 5
USSR: Per Capita Daily Caloric
Intake in 1975, by Republic

Republic	Calories
USSR average	3,221
Ukraine	3,517
Belorussia	3,472
Latvia	3,363
Moldavia	3,308
Estonia	3,276
Georgia	3,234
Russian (RSFSR)	3,231
Lithuania	3,205
Kazakh	2,963
Armenia	2,938
Azerbaijan	2,854
Tajik	2,754
Uzbek	2,644
Turkmen	2,612
Kirghiz	2,599

agricultural production. Without the existing redistribution of foodstuffs between regions, the differences in consumption would be much wider. For example, per capita consumption of meat in Estonia in 1975 was 80 kg, and per capita production was 115 kg, while in Uzbek per capita consumption of meat was 31 kg, and per capita production, 18 kg (see table 7).

Some reduction of regional disparities occurred in the 1965-75 period (see table 8)—especially in the consumption of meat and milk. But even after these years of relatively good growth in agricultural output and in per capita consumption of quality foods, the range in food availability between the most prosperous and least prosperous republics was striking (see table 7). Although more recent comprehensive data are not

available, limited data suggest that regional disparities have not narrowed since the mid-1970s.³⁶

Both the Andropov and Chernenko leaderships indicated awareness that ethnic differences and nationalist aspirations are prime sources of potential domestic political tension. Both realized that regional inferiority in consumption levels can contribute to ethnic grievances. However, Moscow is also aware that further redistribution away from high consumption regions to improve the welfare of others is likely to cause considerable irritation among those losing supplies of quality foods and other highly desired consumer goods.

Outlook

Development of the Soviet farm sector will depend strongly on weather conditions and how vigorously the leadership implements the Food Program. Our baseline projection of average annual growth in net farm output of 2.0 to 2.5 percent in the 1980s assumes weather conditions approximating the 1960-83 average and substantial implementation of changes proposed in the Food Program.

If production of various agricultural commodities rises at the average annual rates implied by our baseline projection and the pattern of use of these commodities—both for food and for other uses—does not change, per capita consumption of quality foods will improve. Even without imports to supplement supplies available for consumption, more meat, dairy products, vegetables, and fruit should be available per capita in 1990 (see table 9). The projected availability is considerably short of goals for vegetables and fruit but still represents a marked improvement.³⁷

³⁶ Per capita consumption of meat in the USSR as a whole, for example, stagnated from the mid-1970s through 1982, but in the Belorussian, Russian, and Estonian republics per capita consumption of meat increased, suggesting that for meat, at least, republic differences have widened.

³⁷ The projections for potatoes and bread and cereal products have not been reduced to account for the substitution of quality foods for staples that would occur. Because of this substitution (which we are unable to allocate to specific products), the total caloric intake in 1990 will be less than that implied by summation of caloric equivalents for the quantities listed in the table.

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Table 6
USSR: Per Capita Consumption of
Six Food Products in 1965, 1975, and 1982
in Selected Republics ^a

Kilograms

	Meat (including slaughter fat)	Milk	Eggs (units)	Vegetable Oil	Sugar	Vegetables (excluding potatoes)
Armenia						
1965	27	271	90	2.3	26	74
1975	42	392	125	1.9	28	110
Azerbaijan						
1965	23	168	77	2.4	29	40
1975	32	290	122	1.9	38	56
1982	33	246	148	3.2	39	72
Belorussia						
1965	45	299	119	4.2	26	68
1975	62	385	260	5.7	40	75
1982	64	369	307	7.5	44	80
Estonia						
1965	63	406	16	4.6	40	69
1975	80	442	258	8.2	41	79
1982	81	443	305	9.6	45	80
Georgia						
1965	28	183	69	2.8	29	48
1975	42	286	109	3.8	38	63
Kazakh						
1960 ^b	38	206	75	4.3	26	40
1975	56	270	178	6.1	35	80
Latvia						
1965	63	433	150	6.1	41	72
1975	77	484	239	6.7	44	73
Lithuania						
1965	61	396	169	3.6	32	70
1975 ^c	80	449	234	5.0	37	84
Russian (RSFSR)						
1965	42	271	141	7.5	37	70
1975	60	332	252	8.0	44	84
1982	62	314	289	9.6	46	97
Turkmen						
1965	33	113	45	6.1	22	68
1975	47	154	75	5.9	26	89
Ukraine						
1965	41	245	124	7.8	36	102
1975	60	335	210	8.5	45	118
1982	59	308	253	10.3	52	123

^a 1982 data for Armenia, Georgia, Kazakh, Latvia, Lithuania, and Turkmen not available.

^b Statistics for 1965 not available.

^c 1974 data used for all but meat and milk.

Source: Various republic statistical handbooks.

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Table 7
USSR: Per Capita Production and Consumption
of Meat and Milk in 1975 in Selected Republics

Kilograms

	Meat ^a		Milk	
	Production	Consumption	Production	Consumption
USSR average	59	57	357	316
High production				
Ukraine	68	60	421	335
Belorussia	85	62	622	385
Lithuania	137	80	840	449
Latvia	97	77	713	484
Estonia	115	80	832	442
Low production				
Uzbek	18	31	123	165
Azerbaijan	19	32	105	290
Tajik	23	34	106	150
Turkmen	26	47	92	154
Armenia	24	42	149	392

^a Includes slaughter fat.

Source: Republic statistical handbooks.

Table 8
USSR: Coefficient of Variation ^a Among
Republics in Per Capita Consumption of
Selected Food Products, 1965-75 ^b

	1965	1970	1975
Meat	.341	.321	.262
Milk	.367	.303	.263
Eggs	.353	.388	.348
Vegetable oil	.386	.411	.396
Sugar	.194	.177	.155
Vegetables	.227	.220	.210

^a The coefficient of variation is a measure of dispersion that relates the standard deviation and the mean by expressing the standard deviation as a percentage of the mean. Thus, a decrease over time in the coefficient of variation means that regional differences decreased.

^b Data derived from table 6; complete data were available for 11 of the 15 republics.

Despite the projected improvement in availability of quality foods from domestic output, the consumption targets for 1990 as set out in the Food Program, however, could be only partly met from domestic sources. Without continued imports of meat, vegetables, fruit, sugar, and vegetable oil, the structure of per capita consumption, under these assumptions regarding growth and end use, would be that shown in the third column of table 9.³⁸ The USSR would be able to supply milk and eggs in planned amounts from domestic production. But domestic production would need to be supplemented by imports to meet 1990 targets for meat, vegetables, fruit, sugar, vegetable

³⁸ If the Soviets reach their 1990 per capita consumption goals, per capita consumption of meat would be 60 percent of the 1982 US level; sugar and other sweeteners, 75 percent; eggs, fruit, and vegetables, about 100 percent; milk (fluid milk equivalent), 130 percent; flour and cereal products, about 200 percent; fish, 250 percent; and potatoes, 300 percent.

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Table 9
USSR: Per Capita Consumption in 1983 and 1990

Kilograms

	1983	1990 Goals ^a	1990 Projection (without imports)	1990 Projection (with imports) ^b
Meat (including slaughter fat)	58	70	63 to 64	66 to 67
Milk	309	330 to 340	338	338 ^c
Eggs (units)	253	260 to 266	292	292 ^c
Fish	17.6	19	18 ^d	19
Sugar	44.2	45.5	31	47
Vegetable oil	9.6	13.2	7	10
Potatoes	110	110	110 ^c	110 ^c
Vegetables and melons	101	126 to 135	110	112
Fruit and berries	44	66 to 70	51	56
Bread and cereal products	136	135	135 ^c	135 ^c

^a The total caloric intake that would result from a diet conforming to the indicated goals would be unrealistically high, because it would fail to reflect the substitution of quality foods for staples—bread and cereals and potatoes—that would occur. The official 1990 per capita consumption goals appear to embody an effort to reassure the consumer that the supply of staple foods will be adequate.

^b We have assumed for illustrative purposes that imports will be at 1982-83 levels.

^c Because the 1990 projection (without imports) exceeds midpoint of the 1990 goal, we have assumed that there will be no imports.

^d Based on 1990 gross fish catch targets. We could not assume continuation of the growth rates of the 1960-83 period because of unfavorable changes in ocean fishing conditions.

^e Because significantly more grain and potatoes are now produced than are required to meet 1990 targets for human consumption, we have assumed that the supply in 1990 would permit consumption at planned levels without imports. We are unable to predict how consumption of these products would fall because of increased consumption of quality foods. Thus the amounts shown represent an upper bound rather than a best estimate of 1990 consumption.

oil, and fish (in small amounts).³⁹ The per capita consumption provided by our baseline projection of growth in farm output probably would be considered adequate by the leadership. The Soviets will probably continue to import meat, vegetable oil, fruits, and vegetables at levels similar to those of the recent past. Leadership decisions on levels of imports will be affected, however, by the popular mood, hard currency needs, the international political situation, and other domestic projects and programs requiring imports.

If net farm output for the rest of the decade grows at a faster rate than we project—in the most optimistic case 2.5 to 3.0 percent per year—the leadership may choose to reduce imports of selected foodstuffs but probably not by sizable amounts. If net farm output growth is less than we project—in the worst case 0 to

³⁹ For all commodities, except sugar, imports at 1982-83 levels would be insufficient to bring total supplies to levels that would permit 1990 consumption targets to be met. In the case of sugar, however, 1990 targets can be met with fewer imports.

0.5 percent per year—the leadership has positioned itself to cope, using rationing and special distribution systems already in place. Under such a scenario, ground gained in 1983-84 could be lost, putting per capita consumption back to 1982 levels. Rather than permit such a drop, Moscow would probably step up food imports to sustain current consumption levels. In addition, the leadership might choose to increase farm investment somewhat to foster higher growth.

The USSR's food problem is not likely to be solved by 1990. But the modest growth in per capita consumption (table 9) that we project—along with continued imports of some quality foods, the leadership's reluctance to promise much more than reasonably can be delivered, and a continuation of the system of allocating food at the workplace—will probably prevent food shortages from becoming the volatile issue they threatened to become in the late 1970s and early 1980s.

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Appendix A

Leadership Approaches to
Food Supply Issues, 1955-75**Khrushchev**

When Khrushchev came to power in 1955, the Soviet diet was adequate in the most basic sense, providing sufficient calories to the population at large. Famine caused by domestic policy and production failures had not occurred since the 1930s, and widespread hunger had last been experienced during World War II and its aftermath. The structure of the bland, monotonous diet was heavily overweighted with starchy staples—potatoes, bread, and cereal products. [redacted]

Recognizing the desirability of a more plentiful and varied diet throughout the year, the successive post-Stalin leaderships have singled out diet as the focal point of consumer welfare programs. The share of investment going to agriculture was pushed up substantially under Khrushchev and Brezhnev. Neither leadership, however, expected that it would take so long to provide a diet meeting consumer preferences. [redacted]

Although the Soviet diet today contains a substantially higher proportion of quality foods than it did in the early 1960s and more closely resembles food consumption of the United States and Western Europe, progress has not been steady and occasionally ground has even been lost. This erratic progress, together with the leadership's unrealistic promises of rapid improvement, played havoc with consumer expectations. Periods of headway and growing satisfaction with the food supply have been abruptly punctuated by shortages and disappointment. [redacted]

Brezhnev's Legacy

Brezhnev's agricultural policies, followed since the March 1965 plenum on agriculture, focused on improving the technical underpinnings of agriculture and promoting a more effective use of inputs through better material incentives for the farmworker. These policies essentially conformed to the prescription of the September 1953 plenum on agriculture, which was orchestrated by Khrushchev and which marked a turning point in agricultural policy. Khrushchev had

**Long-Term Changes in Food Availability and
the Nutrient Content of the Soviet Food Supply**

Since 1965, per capita supplies of meat and vegetables (not including potatoes) have risen by 40 percent; milk and milk products, by 23 percent; fish, by 40 percent; fruit, by 55 percent; sugar, by 30 percent; and eggs, by 100 percent. [redacted]

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[redacted] supplies of food and nutrients are not equivalent to consumption because large losses occur during processing, distribution, and meal preparation. Such losses are somewhat larger in the USSR than in the United States; thus equivalence in per capita supplies does not imply exact equivalence in consumption. As these foods became more available, consumers reduced their consumption of bread and cereal products by 13 percent and potatoes by 23 percent. Most of these adjustments had occurred by the mid-1970s. [redacted]

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The nutrient content of the Soviet food supply therefore changed appreciably between 1965 and 1981.

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The per capita level of supply of food energy (calories) increased by 6 percent and nearly equals the US level. The per capita level of carbohydrate dropped 2 percent, while that of protein increased 8 percent and nearly equals that of the United States. The per capita daily level of fat rose by 26 percent—a sharp increase. The levels of some vitamins and minerals in the food supply have also increased. Even more important from the consumer's point of view, the share in the consumption of protein contributed by animal products has risen, from about one-third in 1965 to nearly one-half in 1981. This share, however, is still well below that in the US food supply—nearly 70 percent in 1981. [redacted]

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called for substantially larger investment, sharp increases in state purchase prices for farm output, and greater production of fertilizer and agricultural equipment. Under Brezhnev's leadership, investment in agriculture and its supporting industries rose to one-third of total investment in the Soviet economy.⁴⁰ []

Brezhnev shared Khrushchev's perception that the Soviet people were unwilling to postpone consumption gains. He also believed that providing an ample supply of the quality foods they desired would foster commitment to the Soviet system and spur workers' productivity. []

Under Brezhnev, measures were taken in the early 1970s to increase the output of livestock products. These efforts may well have reflected the lessons of the December 1970 unrest in Poland over bread-and-butter issues. When harvests failed to meet planned levels in 1972 and 1975, the leadership decided to purchase sizable amounts of grain abroad to support the livestock herds. Even with grain imports, however, feed supplies were inadequate in 1975, and distress slaughter of herds was widespread. []

Despite disappointing setbacks in grain harvests (in 1972 and 1975) and livestock output (in 1973 and 1976), rapid progress in supplying quality foods was made under Brezhnev from 1963 to 1974. This progress, however, led to much optimism over what was to come. Production of crops and livestock products during the 1965-75 period grew considerably more rapidly than the population. But the distress slaughtering in 1975 prevented further gains in meat output until 1978. []

⁴⁰ In addition to direct investment in farm machinery, equipment, and construction, this measure of "agricultural investment" includes allocations to ministries providing goods and services to agriculture—such as fertilizer, pesticides, machinery, mixed feed, repair services, roads, storage, and transportation facilities—the Ministry of Procurement and ministries managing off-farm food processing. []

The Brezhnev leadership during the late 1970s persistently emphasized the link between consumer welfare and productivity. The Polish crisis in 1980—coming the year after a particularly disappointing performance in Soviet agriculture and a sharp widening of the gap between supply and demand for quality foods—worried the leadership. During the spring and summer of 1980, Soviet workers in some large industrial installations went on strike, partly because of food shortages. []

Thus, in the late Brezhnev years, the leadership again had to contend with the consequences of its failure to provide the Soviet populace with a quality diet. The Brezhnev Food Program (1982) was intended to reduce the costly dependence on imports of feeds and food, upgrade the quality and variety of the diet, and reduce the impact of weather on output. To bring about these results, the Food Program was to maintain the high level of investment in agriculture, increase procurement prices for farm products, improve the quality of rural life, and promote an upgrading and integration of activities among the broad range of entities engaged in and supporting food production. []

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Appendix B

Infant Nutrition A "Food Problem"

Soviet health authorities have targeted the diets of infants and young children for improvement. Infant mortality climbed from a low of 22.9 per thousand in 1971 to 27.9 per thousand in 1974, after which year the Soviets stopped reporting a figure.⁴¹ The Soviets have attributed the increase to a number of factors: past statistical underreporting, the increased incidence of alcoholism and smoking among women, increased environmental pollution, poor prenatal care, the effects on subsequent pregnancies of a high average number of abortions among Soviet women, the increasing number of young mothers, and poor nutrition. [redacted]

At the General Session of the USSR Academy of Medicine in early 1982, Minister of Health S. P. Burenkov called for expansion of preventive care for infants and children and pointed out that "a crucial factor in reducing the disease rate among children is the provision of a proper diet and breast-feeding in particular. Unfortunately, inadequate attention is being paid to the problems of insufficient infant formula supply and to publicizing the values of breast-feeding."⁴² Because formula is often unavailable as a result of production, packaging, transport, and distribution problems and because many mothers return to work soon after childbirth, Soviet mothers often feed their infants cow's milk or reconstituted powdered milk—neither of which satisfies the vitamin D requirements of infants.⁴³ [redacted]

⁴¹ Infant mortality is defined as the number of deaths in children under 1 year of age per 1,000 live births. The Soviet definition of infant mortality excludes certain categories of infant deaths that Western demographers estimate account for 14 percent of infant mortality. Even so, the infant mortality rate for the USSR by this definition was an estimated 31.1 per thousand in 1976, the latest year for which a reliable estimate is available. The US infant mortality rate, more broadly defined, was 15.2 in 1976. [redacted]

⁴² *Meditsinskaya gazeta*, 17 February 1982. A 1981 party-state decree provides for additional paid leave for mothers so that they can care for their infants until they reach the age of 1 year. The decree is intended to bolster declining birth rates and probably reflects the recognition that infants placed in day-care facilities are more likely to contract infectious diseases than infants cared for at home, particularly breast-fed infants. [redacted]

⁴³ The problem is compounded by the fact that the Soviet Union does not add vitamins to most of its processed milk and milk products. [redacted]

The 1977 party-state decree on the improvement of medical care ordered that the production and variety of children's foods be "expanded considerably." However, the followup 1982 party-state decree, "On Additional Measures for Improving the Health Care of the Population," complained that "the production of special food for children is growing at a slow rate." Plans call for the annual production of 9,500 tons of dry infant formula and 100,000 tons of concentrated and liquid formula by 1985.⁴⁴ Production capacity probably does not exceed 50,000 tons a year; in 1982 it was 36,000 tons.⁴⁵ If we assume that the combined figure of 110,000 tons represents the Soviet estimate of requirements, then one-third as much infant formula is produced as is needed. An additional plant, which has a capacity of 6,500 tons a year, is under construction, and special assembly lines to produce infant formula at dairy plants are planned. Even so, the USSR probably cannot meet its 1985 goals for production of infant formula. [redacted]

Although a Soviet public health official recently denied the existence of "aggravated" rickets among Soviet children, she did admit that the disease in its early form exists.⁴⁶ Soviet medical research literature indicates that, in the 1970s, rickets (caused by vitamin D deficiency) and nutritional anemia (sometimes in serious form) were occurring in Soviet children.⁴⁷ [redacted]

⁴⁴ *Pravda*, 26 August 1982; *Ekonomicheskaya gazeta*, No. 28, 1983, p. 2. [redacted]

⁴⁵ *Sotsialisticheskaya industriya*, 18 September 1982. [redacted]

⁴⁶ "Letters to the Editor," *Wall Street Journal*, 14 March 1983, in response to *Rising Infant Mortality in the USSR in the 1970s* by Christopher Davis and Murray Feshbach, (Washington DC: US Bureau of the Census, September 1980) No. 74, and to "Why Are Soviet Babies Dying?" *Wall Street Journal*, 9 February 1983. [redacted]

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